

CLAIMS

1. A device of converging and guiding an incoming light to reflect for display by having a convergence convex lens or a reflection concave lens to converge the incoming light into light beams; then to project brighter light beams into one end of a light guide device and reflecting the beams from the other end in one or multiple directions to display text or pattern, is essentially comprised of:

- a light convergence device 100: related to one or more than one unit of convergence convex lens or reflection concave lens subject to light coming from one or multiple directions so to converge and intensify the light from a selected direction before it being projected to one end of a light guide device 101 and reflected from the other end of the light guide device 101 to display selected text or pattern; and
- a light guide device 101: comprised of a reflection mirror or light guide fiber to receive light beams intensified and outputted by the light convergence device 100 when exposed to a light source, then to project the light in one or multiple directions either by the light guide device 101 or by means of a rectification mask to produce light reflection with brighter light beams for displaying selected text or pattern;

As required, the light convergence device 100 may be provided at one or more than one directions, and identical or different texts or patterns displayed by the light guide device 101 may be selected for display by the display device operating by converging and guiding the incoming light for reflection;

Alternatively the light guide device 101 may be programmed for continuous light reflection to display identical or different texts or patterns by changing an incidence of light in relation to the light convergence device 100 and by programming the light projection location, texts and patterns from the aspect of display in relation to the light guide device 101.

2. A device of converging and guiding an incoming light to reflect for display as claimed in Claim 1, wherein, a solar cell that converts optical energy into power, or a windmill power generation device or a city power source, and a secondary source 104 comprised of a storage device as optional are adapted for a combined application to provide the following auxiliary functions:

- (1) A circuit device 102 for control the light adapted to the present invention drives an auxiliary device 103 which converts power into optical energy for display when the background becomes dim, and the circuit device 103 is immediately cut off once the background lights up. The auxiliary display device 103 can be operated and controlled for continuous display when the present invention is exposed to incoming light. The auxiliary display device 103 when driven by the incoming light executes display of text or pattern and an operation and control of time-delay periodical cutoff to achieve mixed display with the text or pattern display produced by reflecting the light through the light guide device 101 where the incoming light is converged and intensified; or

(2) The device operating by converging and guiding the incoming light to reflect for display is provided with a light activated auxiliary power to drive another display device that converts power into optical energy for text or pattern display or audio signal transmission; or

(3) The device operating by converging and guiding the incoming light to reflect for display is provided with an optical conversion device to convert the incoming light into power that can be charged into a storage device as a stand-by to drive the device that converts power into optical energy for display or the audio signal transmission device.